APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,704	11/30/2001	Harm Sluiman	CA920010006US1	6671

			EXAMINER
7590	05/06/2004		CHEN, CHONGSHAN

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ART UNIT	PAPER NUMBER
2172	3

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application N .	Applicant(s)
	09/998,704	SLUIMAN, HARM
	Examiner	Art Unit
	Chongshan Chen	2172

-- *The MAILING DATE of this communication app ars on the cover she t with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-22* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-22* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

1.   Claims 1-22 are pending in this Office Action.

Priority

2.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers

have been placed of record in the file.

Drawings

3.   The drawings are objected to because part of Figure 1 and 2 are unreadable. A proposed

drawing correction or corrected drawings are required in reply to the Office action to avoid

abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1, 3, 7, 9-15 and 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated

by Hirsch (6,282,547 B1).

        As per claim 1, Hirsch teaches a schema for storing meta data that describes at least one

relational database comprising:

at least one abstract class for defining at least one data type of at least one member, said abstract class including (Hirsch, Fig. 2, col. 12, line 65 – col. 13. line 8, "Derived from VcPropertyBag are *an abstract base class ...*":

at least one property for indicating at least one generic Structured Query Language data type for said member (Hirsch, Fig. 2-6, col. 12, line 65 – col. 13, line 48);

at least one property for indicating at least one database-specific data type name for said member (Hirsch, Fig. 2-6, col. 12, line 65 – col. 13, line 48); and

at least one method for constructing at least one object instantiated from at least one class derived from said abstract class (Hirsch, Fig. 2-6, col. 15, line 24 – col. 16, line 53).

As per claim 3, Hirsch teaches all the claimed subject matters as discussed in claim 1, and further teaches said abstract class further comprises at least one property for indicating at least one default value for said type of said member (Hirsch, col. 19, lines 53-55).

As per claim 7, Hirsch teaches a storage system in at least one database catalog comprising:

at least one object of at least one class derived from at least one abstract class for defining at least one data type of at least one member (Hirsch, Fig. 2, col. 12, line 65 – col. 13. line 8), said abstract class including:

at least one property for indicating at least one generic Structured Query Language data type for said member (Hirsch, Fig. 2-6, col. 12, line 65 – col. 13, line 48);

at least one property for indicating at least one database-specific data type name for said member (Hirsch, Fig. 2-6, col. 12, line 65 – col. 13, line 48); and

at least one method for constructing at least one object instantiated from at least one class

derived from said abstract class (Hirsch, Fig. 2-6, col. 15, line 24 – col. 16, line 53).

As per claim 9, Hirsch teaches all the claimed subject matters as discussed in claim 1, and

further teaches storing meta data in a storage system (Hirsch, col. 1, lines 5-25).

As per claim 10, Hirsch teaches all the claimed subject matters as discussed in claim 1,

and further teaches storing meta data relating to the database in at least one meta data store

(Hirsch, col. 1, lines 5-25).

Claims 11-12 are rejected on grounds corresponding to the reasons given above for claim

7.

As per claim 13, Hirsch teaches a schema for storing meta data that describes a relational

database comprising at least one abstract class for naming groups of members in said relational

database, said abstract class having a property for naming said group of said members (Hirsch,

Fig. 2-6, col. 12, line 58 – col. 13, line 48).

As per claim 14, Hirsch teaches an object-oriented description of a relational database

comprising at least one object for referencing a group of members in said relational database,

said object instantiated from a class derived from at least one abstract class for naming groups of

members in said relational database, said abstract class having a property for naming said groups

of said members (Hirsch, Fig. 2-6, col. 12, line 58 – col. 13, line 48).

As per claim 15, Hirsch teaches a computer readable medium containing at least one

object-oriented description of a relational database, said object-oriented description comprising:

at least one object for referencing a group of members in said relational database, said object

instantiated from a class derived from at least one abstract class for naming groups of members

in said relational database, said abstract class having a property for naming said group of said

members (Hirsch, Fig. 2-6, col. 12, line 58 – col. 13, line 48).

Claim 20 is rejected on grounds corresponding to the reasons given above for claim 1.

As per claim 21, Hirsch teaches all the claimed subject matters as discussed in claim 1,

and further teaches reading meta data relating to the database from a meta data store (Hirsch,

Fig. 2-6, col. 12, line 58 – col. 13, line 48).

As per claim 22, Hirsch teaches all the claimed subject matters as discussed in claim 1,

and further teaches reading meta data from a storage system (Hirsch, Fig. 2-6, col. 12, line 58 –

col. 13, line 48).

6.   Claims 16 and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by

Rasmussen et al. ("Rasmussen", 6,662,188).

As per claim 16, Rasmussen teaches a method of facilitating sharing of relational

database types comprising:

transforming a first representation of database meta data into a second representation of

said database meta data, where said second representation of said database meta data follows a

given schema (Rasmussen, Fig. 2, element 20, Transformations, col. 4, line 65 – col. 5, line 35);

and

storing said first representation in a repository in the form of a set of objects of classes

defined in said given schema (Rasmussen, col. 5, lines 14-15).

Claims 18-19 are rejected on grounds corresponding to the reasons given above for claim

16.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirsch (6,282,547

B1).

As per claim 2, Hirsch teaches all the claimed subject matters as discussed in claim 1, and

further teaches said abstract class is a first abstract class, further comprising a second abstract

class for describing a user defined data type, said second abstract class derived from said first

abstract class (Hirsch, col. 12, line 65 – col. 13. line 8).

Hirsch does not explicitly disclose said second abstract class including: at least one

property for indicating whether an object of at least one class derived from said second abstract

class is instantiable; and at least one property for indicating whether said class derived from said

second abstract class is final. However, Hirsch teaches a second abstract class (child class)

derives from the first abstract class (parent class). It is well known in the art that a user can

specify whether the child class is instantiable and specify the child class as final in order to

prevent the child class to be overridden.

9.   Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirsch

(6,282,547 B1) in view of Goodwin et al. ("Goodwin", Pub. No.: 2002/0023261 A1).

As per claim 4, Hirsch teaches all the claimed subject matters as discussed in claim 1,

except for explicitly disclosing at least one property for indicating at least one mapping of said

database-specific data type name to at least one Java Database Connectivity data type. Goodwin

teaches disclosing at least one property for indicating at least one mapping of said database-

specific data type name to at least one Java Database Connectivity data type (Goodwin, page 1,

[0008]-[0010]). Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to include Java Database Connectivity data type in the database

schema of Hirsch in order to connect the database with application program.

As per claim 5, Hirsch teaches all the claimed subject matters as discussed in claim 1,

except for explicitly disclosing said schema is described using the Unified Modeling Language

(UML). Goodwin teaches using Unified Modeling Language (UML) to describe the schema

(Goodwin, page 3, [0034]). Therefore, it would have been obvious to one of ordinary skill in the

art at the time the invention was made to use UML to describe the schema in the system of

Hirsch. Because UML is the universal language to design schema, the database schema designed

in UML will be understood by all the designers.

As per claim 6, Hirsch teaches all the claimed subject matters as discussed in claim 1,

except for explicitly disclosing a serialized stream of meta data in the Extensible Markup

Language Meta data Interchange (XMI) format. Goodwin teaches a serialized stream of meta

data in the Extensible Markup Language Meta data Interchange (XMI) format (Goodwin, page 6,

[0080]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to use XMI in the database schema design of Hirsch because XMI enables

integration of development tools from multiple vendors, collaboration and distribution of object-

oriented design and database schema information, and enhancement of the life cycle of

information resources.

10.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirsch (6,282,547

B1) in view of Hotti et al. ("Hotti", Pub. No.: US 2002/0169745 A1).

As per claim 8, Hirsch teaches all the claimed subject matters as discussed in claim 1,

except for explicitly disclosing a database catalog. Hotti teaches a database catalog (Hotti, page

1, [0009]). Therefore, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to use database catalog in the database schema design of Hirsch because

database catalog logically partitions a database so that data is organized in ways that meet

business or application requirements.

11.   Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen et al.

("Rasmussen", 6,662,188 B1) in view of Goodwin et al. ("Goodwin", Pub. No.: 2002/0023261

A1).

As per claim 17, Rasmussen teaches all the claimed subject matters as discussed in claim

16, except for explicitly disclosing said schema is a Unified Modeling Language schema.

Goodwin teaches using Unified Modeling Language (UML) to describe the schema (Goodwin,

page 3, [0034]). Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to use UML to describe the schema in the system of Hirsch.

Because UML is the universal language to design schema, the database schema designed in

UML will be understood by all the designers.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chongshan Chen whose telephone number is 703-305-8319. The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703)305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 1, 2004

SHAHID ALAM
PRIMARY EXAMINER